

1) $\langle \text{expr} \rangle = (\langle \text{expr} \rangle)$
 $= \langle \text{expr} \rangle * \langle \text{expr} \rangle$
 $= \langle \text{expr} \rangle * \langle \text{int} \rangle$
 $= \langle \text{expr} \rangle * \langle \text{nat} \rangle$
 $= \langle \text{expr} \rangle * - \langle \text{digit} \rangle \langle \text{nat} \rangle$
 $= \langle \text{expr} \rangle * - \langle \text{digit} \rangle \langle \text{digit} \rangle$
 $= \langle \text{expr} \rangle * - \langle \text{digit} \rangle 7$
 $= \langle \text{expr} \rangle * - 07$
 $= \langle \text{expr} \rangle + \langle \text{expr} \rangle * - 07$
 $= \langle \text{expr} \rangle + \langle \text{int} \rangle * - 07$
 $= \langle \text{expr} \rangle + \langle \text{nat} \rangle * - 07$
 $= \langle \text{expr} \rangle + \langle \text{digit} \rangle * - 07$
 $= \langle \text{expr} \rangle + 2 * - 07$
 $= \langle \text{expr} \rangle + 2 * - 07$
 $= \langle \text{int} \rangle + 2 * - 07$
 $= \langle \text{nat} \rangle + 2 * - 07$
 $= \langle \text{digit} \rangle \langle \text{nat} \rangle + 2 * - 07$
 $= \langle \text{digit} \rangle \langle \text{digit} \rangle + 2 * - 07$
 $= \langle \text{digit} \rangle 2 + 2 * - 07$
 $= 12 + 2 * - 07$

2) $\langle \text{stmt} \rangle =$ for $\langle id \rangle = \langle \text{expr} \rangle$ to $\langle \text{expr} \rangle$ do $\langle \text{stmt} \rangle$

- = for $\langle \text{letter} \rangle = \langle \text{expr} \rangle$ to $\langle \text{expr} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = \langle \text{expr} \rangle$ to $\langle \text{expr} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = \langle \text{int} \rangle$ to $\langle \text{expr} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = -\langle \text{nat} \rangle$ to $\langle \text{expr} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = -(\langle \text{digit} \rangle \langle \text{nat} \rangle)$ to $\langle \text{expr} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = -1 \langle \text{nat} \rangle$ to $\langle \text{expr} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = -1 \langle \text{digit} \rangle$ to $\langle \text{expr} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = -12$ to $\langle \text{expr} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = -12$ to $\langle \text{int} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = -12$ to $\langle \text{nat} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = -12$ to $\langle \text{digit} \rangle \langle \text{nat} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = -12$ to $1 \langle \text{nat} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = -12$ to $1 \langle \text{digit} \rangle$ do $\langle \text{stmt} \rangle$
- = for $x = -12$ to 10 do $\langle \text{stmts} \rangle$
- = for $x = -12$ to 10 do $\{ \langle \text{stmt} \rangle; \langle \text{stmts} \rangle \}$
- = for $x = -12$ to 10 do $\{ \langle id \rangle = \langle \text{expr} \rangle; \langle \text{stmts} \rangle \}$
- = for $x = -12$ to 10 do $\{ \langle \text{letter} \rangle = \langle \text{expr} \rangle; \langle \text{stmts} \rangle \}$
- = for $x = -12$ to 10 do $\{ y = \langle \text{expr} \rangle; \langle \text{stmts} \rangle \}$
- = for $x = -12$ to 10 do $\{ y = \langle \text{int} \rangle; \langle \text{stmts} \rangle \}$
- = for $x = -12$ to 10 do $\{ y = \langle \text{nat} \rangle; \langle \text{stmts} \rangle \}$
- = for $x = -12$ to 10 do $\{ y = \langle \text{digit} \rangle; \langle \text{stmts} \rangle \}$
- = for $x = -12$ to 10 do $\{ y = 0; \langle \text{stmts} \rangle \}$
- = for $x = -12$ to 10 do $\{ y = 0; \langle \text{stmt} \rangle \}$
- = for $x = -12$ to 10 do $\{ y = 0; \text{pass} \}$